

A REVISION OF THE FUR MITES MYOBIIDAE (ACARINA) (SUITE).

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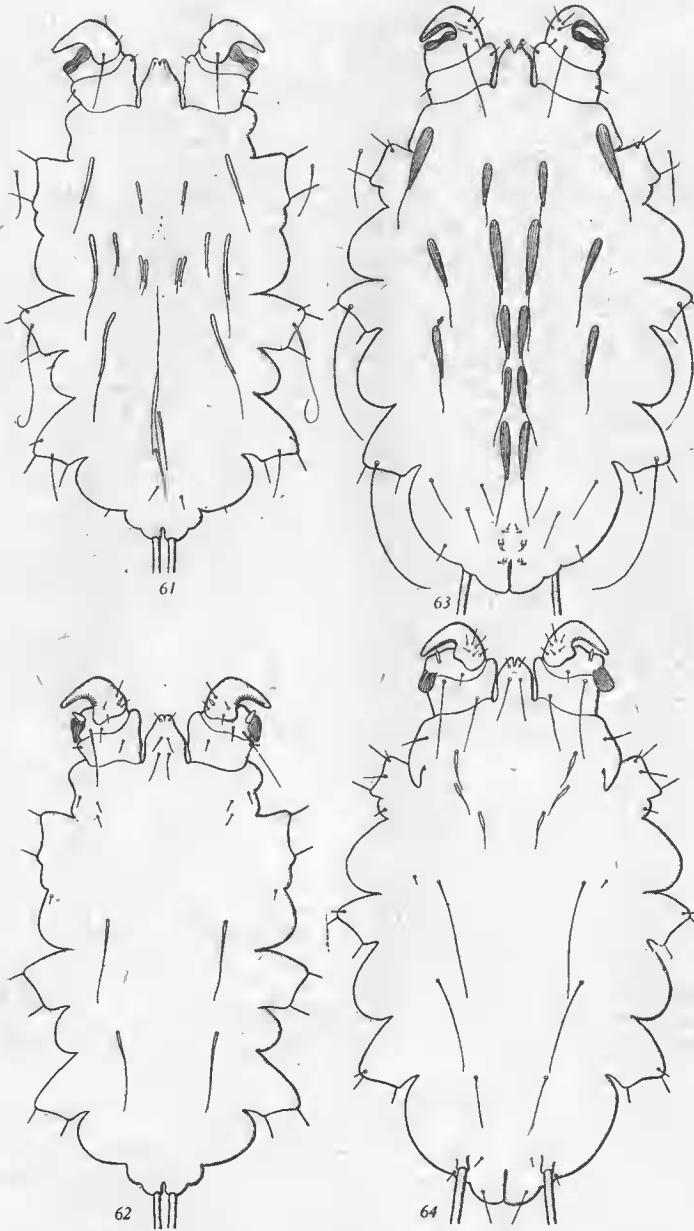
Radfordia multivaga (Poppe, 1908)

Myobia multivaga Poppe, 1908 in Fahrenholz (1908) *Abh. nat. Ver. Bremen*, 19 : 3, 365.

The male dorsum (fig. 61) has lateral spines I anterior to coxae II, extending to lateral spines II, long, slender, two-jointed; lateral spines II posterior to coxae II longer than preceding pair, two-jointed, extending to posterior edge of coxae III; lateral spines III level with coxae III, two-jointed, about equal in length to lateral spines II. Sub-median spines I level with coxae II, short, two-jointed; sub-median spines II level with lateral spines II, two-jointed, longer than preceding spines; sub-median spines III and IV midway between coxae II and III and posterior to the genital pore. Median spine I and II level with coxae IV long, slender, not jointed. Posterior to these there is a pair of small spines close to the median line of the body. Genital pore lying posterior to coxae II, slightly anterior to sub-median spines II. Penis long, slender, tapering, extending from median spine II to a point anterior to coxae III.

The male venter (fig. 62) has three pairs of short spines laterally, anterior to coxae II; posterior to coxae II is a pair of small spines close to lateral edge of body. Midway between coxae II and III is a pair of long, slender spines and a similar pair of spines between coxae III and IV. Tarsus II with a short, stout claw; tarsus III and IV each bearing two long claws.

The female dorsum (fig. 63) has lateral spines I placed between coxae I and II, broad at base, two-jointed, striated and with a long, tapering end; lateral spines II midway between coxae II and III, two-jointed, not as broad as preceding spines, striated; lateral spines III level with posterior edge of coxae III, sub-similar to preceding spines. Sub-median spines I level with middle of coxae II, two-jointed, short, striated; sub-median spines II broad, about twice the length of preceding spines, placed anterior to lateral spines II; sub-median spines III level with coxae III; sub-median spines IV sub-equal to preceding spines, lying midway between coxae III and IV; sub-median spines V level with coxae IV, longer



Radfordia multivaga (Poppe, 1908).

FIG. 61, ♂ dorsum. — FIG. 62, ♂ venter. — FIG. 63, ♀ dorsum. — FIG. 64, ♀ venter.

than preceding spines, extending to the genital pore. Posterior to coxae IV is a transverse row of four long, slender spines and, posterior to this row is a pair of long, slender spines, with a pair of shorter spines closer to the lateral edge of body. Anterior to the genital pore are four small spines; posterior to the pore is the paired genital claws and six small spines.

The female venter (fig. 64) has two pairs of stout spines anterior to coxae II; a third pair of stout spines level with coxae II, posterior to these is a fourth pair of spines. On the lateral edge of body is a pair of small spines posterior to coxae II. Anterior to coxae III is a pair of long, slender spines, flanked externally by a pair of small spines. Midway between coxae II and III is a pair of long, slender spines and a third pair of long spines level with the posterior edge of coxae IV, shorter than the preceding spines. Flanking the bases of the terminal bristles are two pairs of short spines and a pair of long, slender spines flanking the anus. Tarsus II has two short, stout claws; tarsus III and IV each with one long claw.

Type host : Harvest mouse (*Micromys minutus soricinus* Pallas).

Type locality : ? Common on the type host throughout its range.

Measurements : ♂ 0,35 mm × 0,15 mm ; ♀ 0,43 mm × 0,2 mm.

Radfordia caudata (Banks, 1909).

Myobia caudata Banks 1909 *Proc. ent. Soc. Wash.* II : 134.

Myobia canadensis Banks, 1909, *Proc. ent. Soc. Wash.* II : 143.

The male dorsum (fig. 65) has lateral spines I, II and III expanded at base and tapering to long slender points. Sub-median spines I, II and III somewhat similar in shape. All these six pairs of spines are longitudinally striated. Lateral spines I anterior to coxae II, their distal free ends level with genital pore; lateral spines II level with coxae II, longer than preceding spines, extending beyond coxae IV; lateral spines III sub-similar to lateral spines II, level with coxae III, extending to base of terminal bristles. Anterior to terminal bristles is a transverse row of four spines. Sub-median spines I level with coxae II, anterior to level of lateral spines II, their distal free ends level with middle of coxae III; sub-median spines II lying between coxae II and III; sub-median spines III level with coxae III. Penis extending from coxae IV forwards to the genital pore. Genital pore level with sub-median spines II, a pair of small spines lying anterior to the pore. Tarsus II, III and IV each with a pair of claws, those on tarsus II being the shortest.

Type host : Little brown bat.

Type locality : Guclph, Ontario, Canada. March. 27, 1907. Jarvis.

Measurements : ♂ 0,2 mm.

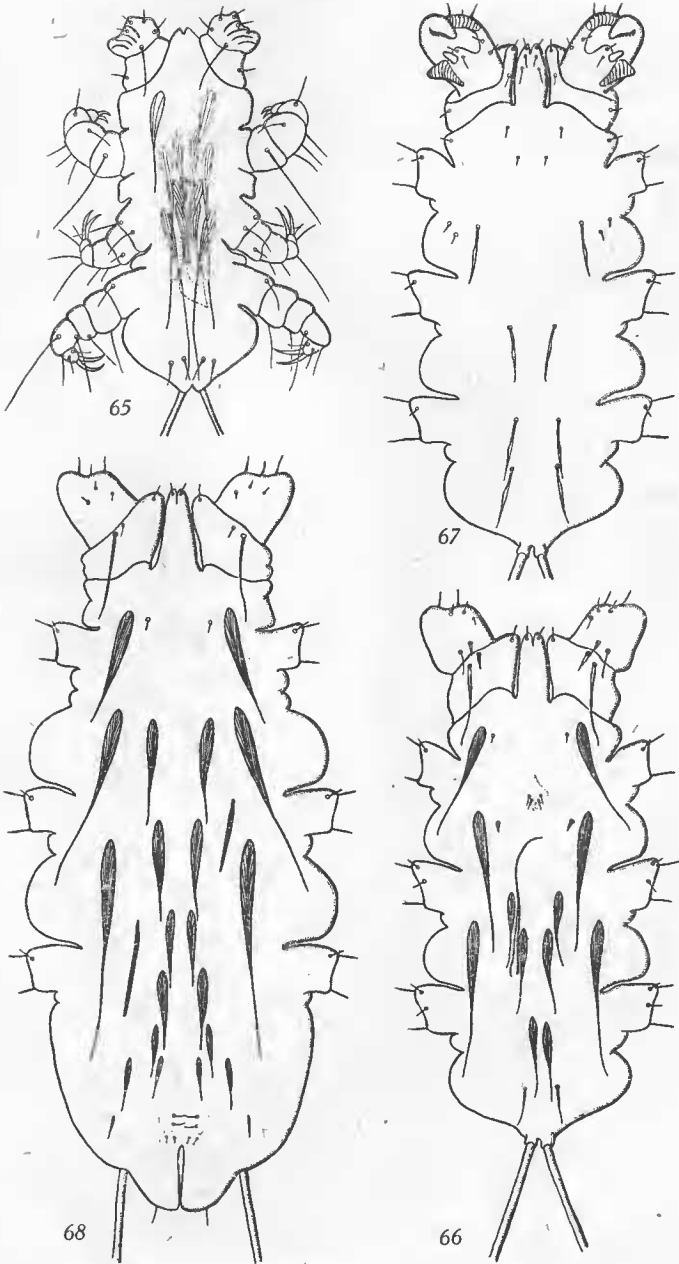


FIG. 65, *Radfordia caudata* (Banks, 1909). — FIG. 66-68, *Radfordia magna* (Radford, 1934). — FIG. 66, ♂ dorsum. — FIG. 67, ♂ venter. — FIG. 68, ♀ dorsum,

Radfordia ingens (Vitzthum, 1914).

Myobia ingens Vitzthum, 1914. *Zool. Anz.* **44** : 322.

The female dorsum has lateral spines I anterior to coxae II, simple, extending to midway between coxae II and III; lateral spines II posterior to coxae II, extending to level of lateral spines III; lateral spines III, level with coxae III, extending to midway between coxae IV and posterior end of body. Sub-median spines I anterior to lateral spines I, shorter; sub-median spines II almost level with lateral spines II, reaching sub-median spines III; sub-median spines III level with coxae III, of equal length to sub-median spines I; sub-median spines IV midway between coxae III and IV, extending to posterior edge of coxae IV; sub-median spines V, level with posterior edge of coxae IV, extending to midway between coxae IV and posterior end of body. From VITZTHUM'S figure it is not quite clear what the arrangement of spines is on the posterior end of the body. There appears to be two groups of three spines near the posterior distal ends of sub-median spines V and two pairs of spines on the lateral edge of body at their level; two pairs of spines on the posterior end of body.

The female venter shows three pairs of small spines anterior to coxae II; anterior to coxae III is a pair of large spines; anterior to coxae IV is a pair of large spines, sub-similar to preceding; posterior to coxae IV is a pair of stout spines, slightly more than half the length of preceding spines. On VITZTHUM'S figure there are a number of slender spines between these last median spines and the posterior end of body, but without any definite formation.

The male is unknown.

Type host : Musk shrew (*Pachyura etrusca* (Savi)).

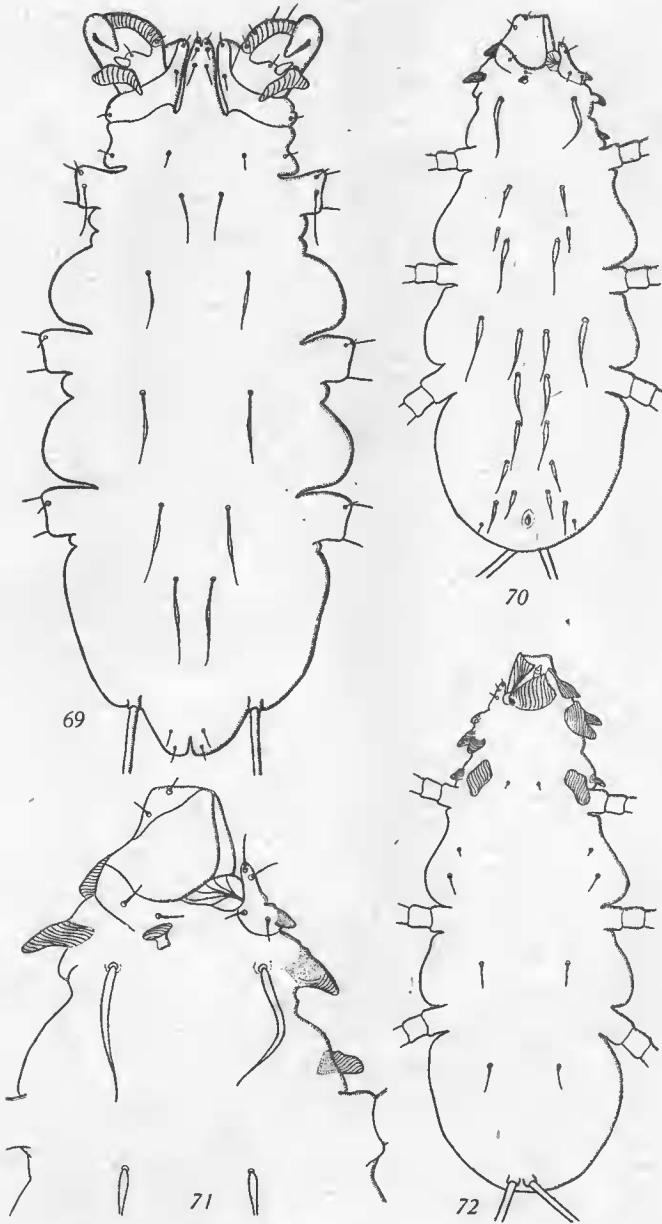
Type locality : Bussaco, Portugal, 1822.

Measurements : ♀ 0,65 mm × 0,33 mm.

Radfordia magna (Radford, 1934).

Myobia magna Radford, 1934, *North West Nat. Arbroath*, p. 46.

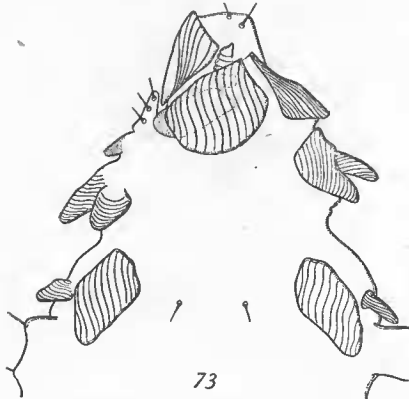
The male dorsum (fig. 66) has lateral spines I long, tapering, striated, close to coxae I; lateral spines II between coxae II and III, extending to midway between coxae III and IV; lateral spines III posterior to coxae III, extending to midway between coxae IV and posterior end of body. Sub-median spines I minute, lying between lateral spines I; sub-median spines II short, stout, level with lateral spines II; sub-median spines III long, stout, level with coxae III; sub-median spines IV posterior to coxae III, similar to preceding spines; sub-median spines V level with coxae IV; sub-median



Radfordia magna (Radford, 1934).
FIG. 69, ♀ venter. — FIG. 70, Nymphal dorsum. — FIG. 71, Nymphal capitulum (dorsal). — FIG. 72, Nymphal venter.

spines VI simple, lying between preceding pair of spines and posterior end of body. Genital pore posterior to coxae II with a chitinized scutum and two pairs of genital spines. Penis hook-like, extending from coxae IV forwards to midway between coxae II and III.

The male venter (fig. 67) has three pairs of spines anterior to coxae II; a pair of long spines posterior to coxae II which are flanked laterally by two pairs of small spines; a pair of long spines posterior to coxae III; a pair of long spines level with coxae IV; a pair of long spines posterior to coxae IV, extending to posterior end of body. Ventral spines I to IV are slightly expanded in the



Radfordia magna (Radford, 1934).
Nymphal capitulum (venter).

middle. Tarsus II with two stout claws; tarsus III and IV, each with two long claws.

The female dorsum (fig. 68) has lateral spines I striated, placed between coxae I and II, tapering; lateral spines II similar in shape but longer, lying between coxae II and III; lateral spines III posterior to coxae III, slightly longer than preceding spines. Sub-median spines I short, simple, flanking lateral spines I internally; sub-median spines II striated, lying between lateral spines II, of similar shape; sub-median spines III level with coxae III; sub-median spines IV between coxae III and IV, shorter than preceding spines; sub-median spines V level with coxae IV; sub-median spines VI posterior to coxae IV and flanking the preceding spines; sub-median spines VII and VIII in a transverse row; sub-median spines IX level with genital pore. Four pairs of spines are borne near the genital pore and the posterior tip of body has two spines.

The female venter (fig. 69) has two pairs of spines anterior to

coxae II; third pair of spines between coxae II, long, simple. The first pair of long spines lies between coxae II and III; posterior to coxae III is a pair of long spines; level with coxae IV is a pair of long spines; posterior to coxae IV is a pair of long spines. Flanking the anus externally and lying between the terminal bristles are two pairs of short spines. Tarsus II with two short, stout claws; tarsus III and IV each with two long claws.

The dorsum of the nymph (fig. 70) has a pair of long, slightly expanded spines anterior to coxae II; posterior to coxae II is a pair of stout spines; anterior to coxae III is a pair of long, stout spines flanked laterally by a pair of smaller spines; between coxae III and IV is a pair of long spines flanked internally by a pair of small spines; level with coxae IV is a pair of spines; posterior to coxae IV are five pairs of spines arranged as in the figure.

The venter of the nymph (fig. 72) has a pair of small spines anterior to coxae II; two pairs of spines laterally between coxae II and III; one pair of spines between coxae III and IV closer to the median line of body and a pair of similar spines posterior to coxae IV.

On the capitulum of the nymph are a number of spines and sclerotic plates (fig. 71 and 73) by means of which the mite is able to maintain a firm grasp of the hairs of its host; there is also a large flap-like process at the anterior end of the capitulum with its inner surface deeply grooved, this is also used in grasping the hair.

Type host : Indian fruit bat (*Pteropus giganteus* Brunnich).

Type locality : Zoological Gardens, Belle Vue, Manchester, England.

Measurements : ♂ 0,61 mm × 0,30 mm ; ♀ 0,81 mm × 0,4 mm.

Holotype male, allotype females (3) and nymphs in the British Museum (Nat. Hist.) numbered respectively 1935-3-18-1; 1935-3-18-2; and 1935-3-18-3. Paratypes in the author's private collection.